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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,405

07/17/2006

Risto Siliqi

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08/04/2009

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EXAMINER

HUGHES, SCOTT A

ART UNIT

PAPER NUMBER

3663

MAIL DATE

DELIVERY MODE

08/04/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/565,405	Applicant(s) SILIQI, RISTO	
	Examiner SCOTT A. HUGHES	Art Unit 3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) 15-19, 24 and 36-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 23, 25-35 and 40-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 5/4/2009 have been fully considered but they are not persuasive.

Applicant argues that the claimed process of the independent claims is drawn to methods of processing seismic traces for extracting information about the geology of the subsurface. Applicant argues that seismic data are obtained by propagating seismic waves through the subsurface by means of seismic sources and picking up, by means of seismic sensors, signals resulting from reflections of the waves. Applicant argues that these seismic traces relate to a specific subsurface area and bear real-world information about the geometry and properties of the subsurface. However, these features of seismic sources and receivers are not claimed, and therefore the claims are not tied to these particular apparatus because the claims only require the data that result from a seismic survey, and do not require that the sources and receivers be used in the method.

Applicant argues that raw seismic data are intrinsically technical because they are real world data bearing information about the geology of the subsoil. Applicant further argues that eliminating noise from the raw data includes NMO correction, and that this correction requires the determination of two anisotropic parameters. Applicant argues that the invention relates to the determination of these parameters, so that NMO correction can be applied to traces to filter out noise so that useful information about the subsoil can be clearly identified and interpreted. Applicant argues that because of this,

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claims 1-14, 20-23, 25-35, and 40-51 should be in allowable form. These arguments are not persuasive, as applicant has not claimed any of the transformation of the data or the processing steps involved to transform the data into useful information about the geology of the subsoil. Applicant has not claimed the filtering out of noise from the traces, or any other processing steps that result in a transformation of the data resulting in the argued information about the subsoil that would make the claimed process meet the transformation prong of the *Bilski* test. Applicant's claimed process steps result only in obtaining velocity and annellepticity laws and a general step of processing the traces. As explained above, applicant has not claimed any particular machine or apparatus that performs the claimed method steps. Applicant also has not claimed a transformation of a particular article into a different state or thing. The process starts with seismic data, and ends with processing of the same seismic data after certain parameters related to the data have been obtained/determined.

Applicant argues that *In re Bilski* contains the holding that a process is patent-eligible if the data represent physical and tangible objects. This argument is not persuasive, as applicant has not specifically where in *Bilski* this holding is found. Further, it appears from *Bilski* that this was stated in pure dicta in an example stating that legal manipulation of legal matters is not transformation on page 30.

Applicant's claims also do not meet the transformation test from *Bilski*, as the claims do not contain any limitations directed to a transformation of the seismic data. Instead, applicant's claims contain only limitations directed to the processing steps, and do not have any limitations directed to a transformation of this processed data.

Therefore, the processing steps claimed by applicant do not result in a transformation of a particular article into a different state or thing because the steps only process data and result in a determination of parameters and a general step of processing the same seismic data traces. Applicant's method claims only include steps related to processing of data, and do not contain any limitations directed to the sources, receivers, filtering of noise, or information about the subsurface formation that applicant argues. Further, applicant has not specified the origin or form of the seismic data claimed. Therefore, the seismic data could simply be numerical data representative of seismic signals that are obtained and processed using the steps claimed.

Applicant's claim language contains only processing steps that are not tied to a particular machine or apparatus, and that do not result in the transformation of a particular article into a different state or thing because the claimed process starts and ends with seismic traces being processed.

Applicant's claims are directed to nonfunctional descriptive material, and are not directed to statutory subject matter. See MPEP 2106.01.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-14, 20-23, 25-35, and 40-51 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Process claims 1-14, 20-23, 25-35, and 40-51 are not tied to a particular apparatus or machine and the claims do not transform a particular article to a different state or thing. The steps of the method claims are data processing steps that are not tied to any particular machine or apparatus and the data processing steps do not result in the transformation of a particular article to a different state or thing. Therefore, the process claims are not directed to statutory subject matter.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SCOTT A. HUGHES whose telephone number is (571)272-6983. The examiner can normally be reached on M-F 8:30am to 5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on (571) 272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Scott A. Hughes/
Examiner, Art Unit 3663